ENVIRONMENTAL COMPLIANCE SUMMARY

CALENDAR YEAR 2006

Compliance Program

The United States (U.S.) Department of Energy (DOE) is currently focusing on several goals at the West Valley Demonstration Project (WVDP or Project) to support completion of the requirements identified in the WVDP Act. (See Appendix K[CD].) Activities during 2006 included decontamination and demolition of unneeded facilities, processing and packaging of low-level radioactive waste and mixed waste inventories for off-site shipment and disposal, continued limited operation of the remote-handled waste facility, reducing infrastructure, continued treatment of radioactively contaminated groundwater, and continued environmental monitoring.

Activities at the WVDP are regulated by various federal and state public, worker, and environmental protection laws. These laws are administered primarily by the U.S. Environmental Protection Agency (EPA), the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (USACE), the New York State Department of Environmental Conservation (NYSDEC), and the New York State Department of Health (NYSDOH) through programs and regulatory requirements for permitting, reporting, inspecting, self-monitoring, and audits. Table ECS-1 summarizes the WVDP's compliance status with applicable environmental statutes, DOE directives, and executive orders.

Because release of radiological and nonradiological materials from an active facility cannot be completely prevented, the EPA, NYSDEC, and DOE have established standards for effluents that are intended to protect human health, safety, and the environment. The DOE applies to the EPA for permits to release limited amounts of radiological constituents to the air and applies to NYSDEC for permits to release limited amounts of nonradiological constituents to the air and water in concentrations determined to be safe for humans and the environment. In general, the permits describe release points, specify management and reporting requirements, list discharge limits on those pollutants likely to be present, and define the sampling and analysis regimen. Releases of radiological constituents in water are subject to the requirements in DOE Orders 450.1 (Environmental Protection Program) and 5400.5 (Radiation Protection of the Public and the Environment). A summary of permits may be found in Table ECS-2. (See the Compliance Tables at the end of this chapter.) No releases above allowable permit or regulatory limits occurred in 2006.

Compliance Status

The following summary describes WVDP compliance with DOE Orders 450.1, 5400.5, and 435.1 and federal and state laws and regulations applicable to the Project.

Table ECS-1
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
42 United States Code (USC) §2011 *et seq* .	The **Atomic Energy Act** (AEA) of 1954 was enacted to assure the proper management of source, special nuclear, and by-product material. The AEA and the statutes that amended it delegate the control of nuclear energy primarily to the DOE, the Nuclear Regulatory Commission (NRC), and the EPA.	See discussions of the WVDP Act and of DOE Orders 435.1, 450.1, and 5400.5.	Environmental Compliance Summary
Public Law 96-368	The **West Valley Demonstration Project Act** of 1980 (WVDP Act) authorized the DOE to carry out a high-level liquid nuclear waste demonstration project at the Western New York Service Center in West Valley, New York.	The DOE is focusing on goals that will lead to completion of responsibilities listed in the WVDP Act.	Executive Summary; Introduction; Appendix K
WVDP Memorandum of Understanding (MOU) between the DOE and the NRC	The MOU, mandated by the WVDP Act of 1980, established procedures for review and consultation by the NRC with respect to activities conducted at the Western New York Nuclear Service Center (WNYNSC) by the DOE under the Act. The agreement encompassed those development, design, construction, operation, and decontamination and decommissioning activities that are associated with the project as described in the Act.	The NRC was authorized to prescribe decontamination and decommissioning criteria in accordance with the Act. The NRC visits the Site periodically to ensure that activities are performed in accordance with requirements of established programs.	Environmental Compliance Summary; Chapter 5
DOE Order 231.1A	DOE O 231.1A, **Environment, Safety, and Health Reporting,** was issued to ensure timely collection, reporting, analysis, and dissemination of information on environment, safety, and health issues as required by law or regulations or as needed to ensure that the DOE and National Nuclear Security Administration are kept fully informed on a timely basis about events that could adversely affect the health and safety of the public or the workers, the environment, the intended purpose of DOE facilities, or the credibility of the DOE.	This WVDP Annual Site Environmental Report (ASER) is prepared and submitted annually in compliance with DOE O 231.1A.	Entire 2006 WVDP ASER

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
DOE Order 450.1	DOE O 450.1, **Environmental Protection Program**, required implementation of an environmental management system (EMS) for conducting work at DOE sites to protect the air, water, land, and other natural and cultural resources impacted by DOE operations.	The WVDP EMS is integrated with other site safety management and work planning processes.	Environmental Compliance Summary; Chapter 1
DOE Order 5400.5	DOE Order 5400.5, **Radiation Protection of the Public and the Environment**, established standards and requirements for operations of the DOE and DOE contractors with respect to protecting members of the public and the environment against undue risk from radiation.	Estimated doses from airborne and waterborne releases to the maximally exposed off-site individual in 2006 were 0.049% of the 100 mrem standard, and about 0.02% of natural background radiation.	Environmental Compliance Summary; Chapter 2; Appendices C CD and D CD
DOE Order 435.1	DOE O 435.1, **Radioactive Waste Management,** was issued to ensure that all DOE radioactive waste is managed in a manner that is protective of worker and public health and safety, and the environment.	Management of radioactive waste at the WVDP is conducted in accordance with written site policies, procedures, and manuals and is fully compliant with DOE O 435.1.	Environmental Compliance Summary; Chapter 1
42 USC §4321 *et seq.*	The **National Environmental Policy Act** of 1969 (NEPA) established a national policy to ensure that protection of the environment is included in federal planning and decision-making.	Alternatives for management of WVDP LLW, mixed waste, high-level waste (HLW), and transuranic (TRU) wastes were evaluated in a Waste Management Environmental Impact Statement (EIS). In 2005 the Waste Management Record of Decision (ROD) for the WVDP was issued. In 2006, an Environmental Assessment (EA) DOE/EA-1552 was issued that proposed decontamination, demolition, and removal of unneeded facilities. The DOE then issued a Finding of No Significant Impact (FONSI) and removal of facilities began.	Environmental Compliance Summary

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
42 USC §6901 *et seq* . New York State (NYS) Environmental Conservation Law (ECL)	The **Resource Conservation and Recovery Act (RCRA)** of 1976 and the **New York State Solid Waste Disposal Act** (**NYS ECL** Article 27 [Title 9]) govern the generation, storage, handling, and disposal of hazardous wastes and closure of tank systems that handle these wastes. RCRA was enacted to ensure that hazardous wastes are managed in a way that protects human health, safety, and the environment.	Generation, storage, handling, and disposal of hazardous waste, and closure of tank systems that handle hazardous waste at the WVDP, are conducted in accordance with the RCRA Part A interim status regulatory requirements.	Environmental Compliance Summary; Chapter 4
Amendment to 42 USC §6961	The **Federal Facilities Compliance Act (FFCA)** of 1992 (an amendment to RCRA) clarified provisions concerning the application of certain requirements and sanctions to federal facilities.	An Order of Consent, negotiated under the FFCA, was executed between NYSDEC and DOE in 1996. The order established commitments regarding compliance with the Site Treatment Plan (STP) for mixed waste inventories at the WVDP.	Environmental Compliance Summary
Docket No. II RCRA-3008(h) - 92-0202	The DOE and NYSERDA entered into a **RCRA §3008(h) Administrative Order on Consent** (the Consent Order) with NYSDEC and EPA in March 1992. The Consent Order pertained to management of hazardous waste and/or hazardous constituents from solid waste management units at the WNYNSC.	Written procedures and site activities are compliant with the Consent Order. Compliance was verified by inspections in October 2006. In accordance with the Consent Order, quarterly reports are submitted to NYSDEC from DOE which summarize all RCRA §3008(h) activities conducted at the WVDP for the respective quarter.	Environmental Compliance Summary; Chapter 4
NYS Navigation Law and NYS ECL	**NYS Navigation Law**, Article 12, et seq.; **NYS ECL**, Article 17 (Titles 10 and 17); and Article 40. These articles regulate design, operation, inspection, maintenance, and closure of aboveground bulk petroleum and bulk chemical storage tanks. They also regulate spill reporting and cleanup.	As of June 2006, the last remaining chemical bulk storage tank at the WVDP was closed under these regulations. Nine (9) registered petroleum bulk storage tanks are periodically inspected and maintained. Spills are reported and cleaned up in accordance with written policies and procedures. In 2006 there were no spills in excess of the reportable quantities.	Environmental Compliance Summary; Chapter 1

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
Executive Orders (E.O.) 13101 and 13148	E.O. 13101, **Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition**, promoted the use of recycled and environmentally preferable products and services by federal agencies. E.O. 13148, **Greening the Government Through Leadership in Environmental Management**, specified that heads of federal agencies are responsible for integrating environmental accountability into day-to-day decision-making and long-term planning processes.	Waste minimization, pollution prevention, recycling, and affirmative procurement objectives are achieved in accordance with written site policies and procedures. In January 2007, these Orders were revoked by E.O. 13423, **Strengthening Federal Environmental, Energy, and Transportation Management.**	Environmental Compliance Summary; Chapter 1
42 USC §7401 *et seq* .; Title 40 of the Code of Federal Regulations (CFR) 61, Subpart H; Title 6 of the New York Official Compilation of Codes, Rules, and Regulations (6 NYCRR)	The **Clean Air Act** of 1970 (CAA) and the **NYS ECL** regulate the release of air pollutants through permits and air quality limits. Emissions of radionuclides are regulated by the EPA via the **National Emission Standards for Hazardous Air Pollutants** (NESHAP) regulations. Nonradiological emissions are permitted under 6 NYCRR Part 201-4 (Minor Facility Registrations)	In 2006, the DOE maintained six NESHAP permits for radiological emissions and one Air Facility Registration Certificate for nonradiological emissions at the WVDP. Estimated dose from radiological air emissions to the maximally exposed off-site individual in 2006 was 0.01% of the 10 millirem Subpart H standard. Nonradiological emissions of nitrogren oxides and sulfur oxides were less than 7% of the standard for maintaining the registration certificate.	Environmental Compliance Summary; Chapters 2 and 3; Appendix D[CD]
42 USC §11001 *et seq* .	The **Emergency Planning and Community Right-to-Know Act** of 1986 (EPCRA) was designated to help local communities protect public health, safety, and the environment from chemical hazards.	The WVDP's chemical inventory was reported in 2006. No further reporting was required.	Environmental Compliance Summary

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
33 USC §1251 *et seq.* and NYS ECL	The **Federal Water Pollution Control Act** of 1977 (Clean Water Act [CWA]) and **NYS ECL** (Article 17 [Title 8]) seek to improve surface water quality by establishing standards and a system of permits. Wastewater and storm water discharges are regulated by NYSDEC permits through the State Pollutant Discharge Elimination System (SPDES). Discharges of fill material are regulated through permits issued by the USACE and water quality certifications issued by NYSDEC.	In 2006, no SPDES exceedences were noted and compliance with permit requirements was confirmed by inspections. Monitoring of storm water under the SPDES permit continued. In February 2006, DOE submitted proposed permit modifications to NYSDEC which were issued for public comment and remain pending. Effective September 1, 2006, NYSDEC approved previously submitted modification requests and issued a modified permit.	Environmental Compliance Summary; Chapters 1 and 3; Appendices B and C
E.O. 11990	E.O. 11990, **Protection of Wetlands**, directed federal agencies to avoid, where possible, impacts (e.g., destruction, modification, or new construction) that would adversely effect wetlands wherever there is a practical alternative. Activities in wetlands are regulated by the USACE and NYSDEC permits.	Wetlands on the WVDP are periodically identified, delineated, and mapped. In 2005, NYSDEC approved the wetland delineation report and the USACE performed a field verification wetland assessment in late 2005. The wetland boundaries were confirmed by the USACE on January 26, 2006.	Environmental Compliance Summary
42 USC §9601 *et seq.*	The **Comprehensive Environmental Response, Compensation, and Liability Act** of 1980 (CERCLA, including the **Superfund Amendments and Reauthorization Act** of 1986 [SARA]) provided the regulatory framework for remediation of releases of hazardous substances and remediation of inactive hazardous waste disposal sites.	Based on the results of a Preliminary Assessment Report prepared for the DOE, it was determined that the WVDP did not qualify for listing on the National Priorities List. Therefore, no further investigation pursuant to CERCLA was warranted. However, if a spill exceeds a reportable quantity, CERCLA reporting requirements may be triggered. The WVDP annually reports chemical inventories under EPCRA (also known as SARA Title III) as appropriate.	Environmental Compliance Summary

Table ECS-1 (continued)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
42 USC §300f *et seq.*	The **Safe Drinking Water Act** of 1974 (SDWA) required that each federal agency operating or maintaining a public water system must comply with all federal, state, and local requirements regarding safe drinking water. Compliance in New York is overseen by NYSDOH through the NYS Public Health Law and county health departments.	CY 2006 results from analyses of drinking water were reported to the Cattaraugus County Health Department (CCHD). All test results were within drinking water limits.	Environmental Compliance Summary; Chapter 2; Chapter 3; Appendix C CD
15 USC §2601 *et seq* .	The **Toxic Substances Control Act** of 1976 (TSCA) was enacted to give the EPA the ability to track industrial chemicals produced or imported into the U.S.	Asbestos-containing materials and polychlorinated biphenyls (PCBs) are managed in accordance with written site policies and procedures.	Environmental Compliance Summary
7 USC §136 *et seq.*	The **Federal Insecticide, Fungicide, and Rodenticide Act** of 1996 (FIFRA) and **NYS ECL** provided for EPA and NYSDEC control of pesticide distribution, sale, and use.	Chemical pesticides are applied at the WVDP only after alternative methods are evaluated by trained and NYSDEC-certified professionals and determined to be unfeasible.	Environmental Compliance Summary
NYS ECL, Article 15, Title 5, *et seq* .	NYS ECL, Article 15, Title 5, **Protection of Water** regulated the safety of dams and other surface water impounding structures, including construction, inspection, operation, maintenance and modification of these structures.	The two surface water impounding dam structures on the WNYNSC were inspected in April 2006. The routine inspection identified maintenance corrective actions that were performed and resolved in 2006.	Environmental Compliance Summary
NYS Public Health Law	**Public Health Law**, Article 5 (Laboratories), Section 502 (Environmental Laboratories, Examinations, Certifications of Approval)	The WVDP Environmental Laboratory (the URS Corporation Laboratory) is certified for certain radiological and nonradiological constituents in potable and nonpotable water, as well as for asbestos in solids.	Chapter 5 and Appendix J CD
16 USC §703 *et seq.*	The **Migratory Bird Treaty Act** of 1918 implemented various treaties and conventions between the U.S. and foreign countries for the protection of migratory birds. Under the Act, taking, killing, or possessing migratory birds is unlawful.	The DOE maintains, and complies with, a NYS Division of Fish and Wildlife Bird Depredation License and a U.S. Fish and Wildlife Bird Depredation Permit for the WVDP.	Environmental Compliance Summary, Table ECS-10

Table ECS-1 (concluded)
Compliance Status Summary for the WVDP in 2006

Citation	*Environmental Statute, DOE Directive, Executive Order*	*WVDP Compliance Status*	*Location in 2006 ASER*
16 USC §1531 *et seq.*	The **Endangered Species Act** of 1973 provided for the conservation of endangered and threatened species of fish, wildlife, and plants.	Several ecological surveys of the WVDP premises have been conducted. Except for "occasional transient individuals," no plant or animal species protected under this Act are known to exist at the WVDP.	Surveys are summarized in EIS documents and are not reported in the ASER.
16 USC §470	The **National Historic Preservation Act** of 1966 established a program for the preservation of historic properties throughout the nation.	Surveys have been conducted of the WNYNSC for historic and archaeological sites.	Results are summarized in EIS documents and are not reported in the ASER.
E.O. 11988	E.O. 11988, **Floodplain Management**, was issued to avoid adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.	No activities were performed at the Site that would impact the 100-year flood plain within the WVDP premises.	Environmental Compliance Summary

Environmental Protection Program (DOE Order 450.1). DOE Order 450.1, issued in January 2003, required that DOE sites implement an environmental management system (EMS) by December 31, 2005. An EMS is a continuing cycle of systematic planning, implementing, evaluating, and improving processes and actions undertaken to achieve environmental goals.

Environmental Management System. Since 1999, the WVDP has implemented an EMS via policies and procedures that provide for accomplishing work through proactive management, environmental stewardship, and integration of appropriate technologies across all Project functions. The West Valley Nuclear Services Co. (WVNSCO) EMS satisfies the requirements of both the "Code of Environmental Management Principles" for federal agencies and the International Organization for Standardization 14001, "Environmental Management Systems: Specifications for Guidance and Use." Elements of the WVDP EMS are discussed in Chapter 1 and summarized in Table 1-1.

Integrated Safety Management System (ISMS). The EMS is an important part of the WVDP ISMS. Sitewide management continues to demonstrate commitment to an all-inclusive approach to safety through ongoing efforts to strengthen its integrated safety management program and by encouraging worker involvement.

An annual DOE ISMS review was conducted at the WVDP in September 2006 using criteria and approach documents based principally upon ISMS core continuing expectations listed in DOE G 450.4-1B, "Integrated Safety Management Guide." This guide encompasses ISMS feedback

and improvement, work planning and control, hazard analysis and work performance, and DOE oversight. There were no deficiencies identified in the ISMS implementation process during 2006. Consistent with the "continuous improvement" function of the ISMS process, several areas of improvement, findings (requiring correction), observations (suggested, but not requiring correction), and program strengths were identified. The ISMS review team determined that the WVDP ISMS is both fully implemented and effective.

In 2006, WVNSCO performed the 2006 ISMS Assessment by utilizing an employee survey based on safety culture attributes contained in the ISM draft manual. Results of the survey were presented to the Safety Success Team and Central Safety Committees for recommendations to improve the WVNSCO ISMS and the supporting safety culture.

Radiation Protection of the Public and the Environment (DOE Order 5400.5). Objectives of DOE Order 5400.5 are to ensure that (1) operations are conducted so that radiation exposures to members of the public are maintained within the limits established in the Order, (2) potential exposures to members of the public are as far below the limits as is reasonably achievable, (3) routine and nonroutine releases are monitored and dose to the public is assessed, and (4) the environment is protected from radioactive contamination to the extent practicable.

This Annual Site Environmental Report summarizes radiological releases from the WVDP in 2006, presents estimates of dose to the public and the environment, and compares these values with release and dose standards established by DOE Order 5400.5. (See Chapter 2 and the "Useful Information" section at the end of this report.) In 2006, both releases and estimates of dose to the public were well within applicable limits.

Radioactive Waste Management (DOE Order 435.1). The objective of DOE Order 435.1 is to ensure that all DOE radioactive waste is managed in a manner that is protective of workers and public health and safety, and the environment. To ensure compliance with DOE Order 435.1, radioactive wastes at the WVDP are managed in accordance with the "West Valley Demonstration Project (WVDP) Waste Acceptance Manual." The formal site program, updated in May 2006, defines how radioactive waste – including high-level waste (HLW), transuranic (TRU) waste, low-level waste (LLW), and the radioactive component of mixed waste – is managed at the WVDP to (1) protect the public from exposure to radioactive materials, (2) protect the environment, (3) protect workers, and (4) comply with applicable federal, state, and local laws and regulations, as well as applicable Executive Orders and other DOE directives.

Nationwide Management of Waste. In May 1997, DOE Headquarters issued the Final Waste Management Programmatic environmental impact statement (EIS) to evaluate nationwide management and siting alternatives for treatment, storage, and disposal of five types of radioactive and hazardous waste. The EIS was issued with the intent of developing and issuing a separate record of decision (ROD) for each type of waste analyzed. The alternatives addressed waste generated, stored, or buried over the next 20 years at 54 sites in the DOE complex.

In 1998, the DOE issued RODs for TRU and nonwastewater hazardous waste. In 1999, the DOE issued the ROD for HLW. This decision specified that WVDP-vitrified HLW will remain in storage on site until it is accepted for disposal at a geologic repository.

On February 25, 2000, the DOE issued its ROD for the management of LLW and mixed LLW, including West Valley's wastes. Hanford and the

Nevada Test Site (NTS) were identified as designated national DOE disposal sites for these waste types (Volume 65, Federal Register [FR], p. 10061 [65 FR 10061]). In 2001, West Valley successfully completed the program approval process for access to the NTS, and on July 17, 2001 received approval to ship waste. LLW shipments from the WVDP to the NTS have been ongoing since then.

National Environmental Policy Act (NEPA). Under NEPA, established in 1969, the DOE is required to consider the overall environmental effects of its proposed actions. The President's Council on Environmental Quality established a screening system of analyses and documentation that requires each proposed action to be categorized according to the extent of its potential environmental effect. The levels of documentation include categorical exclusions (CXs), environmental assessments (EAs), and EISs.

CXs document actions that, by their nature, will not have a significant effect on the environment. EAs are used to evaluate the extent to which a proposed action, not categorically excluded, will affect the environment. Based on the analyses presented in an EA and considering public comment, the DOE may determine that the proposed action is not a major federal action significantly affecting the quality of the human environment within the meaning of NEPA. As a result, the DOE may issue a notice indicating Finding Of No Significant Impact (FONSI) and therefore would not be required to prepare an EIS. If a proposed action has the potential for significant effects, an EIS would be prepared that describes proposed alternatives to an action and explains the effects of each.

In December 1988, the DOE published a Notice of Intent (NOI) with the New York State Energy Research and Development Authority (NYSERDA) to prepare an EIS for the completion of the WVDP Act and closure of the facilities at the Western New York Nuclear Service Center (WNYNSC).

The draft EIS, which describes the potential environmental effects associated with Project completion and various site closure alternatives, was completed in 1996 and released without a preferred alternative for a six-month public review and comment period. The West Valley Citizen Task Force (CTF; see inset), having met throughout 1997 and 1998 to review alternatives presented in the draft EIS, issued the West Valley Citizen Task Force Final Report (July 29, 1998). This report provided recommendations and advice on the development of a preferred alternative. The CTF continues to routinely meet with the site managers to discuss current issues relating to Project cleanup, closure, and/or long-term management of the facilities.

In 2001, the DOE formally initiated a plan to split the scope of the 1996 draft EIS into two phases: (1) one for near-term waste management decision-making and (2) one for final decommissioning and/

West Valley Citizen Task Force

In addition to the public comment process required by the National Environmental Policy Act, NYSERDA, with participation from the DOE, formed the West Valley Citizen Task Force in January 1997. The mission of the Task Force is to provide advice on the completion of the WVDP Act and cleanup, closure, and/or long-term management of the facilities at the site. The Task Force process has helped illuminate the various interests and concerns of the community, increased the two-way flow of information between the site managers and the community, and provided an effective way for the Task Force members to establish mutually-agreed-upon recommendations for the site managers to consider in their decision-making process.

or long-term stewardship decision-making. Each phase would be covered by a separate EIS.

The DOE published an NOI on March 26, 2001 (66 FR 16447) formally announcing its rescoping plan and preparation of the waste management EIS. The DOE also published an Advance NOI on November 6, 2001 (66 FR 56090) announcing in advance its commitment to begin work, in cooperation with NYSERDA, on the EIS for decommissioning and/or long-term stewardship.

Waste Management EIS. On May 16, 2003, the DOE issued the draft Waste Management EIS (68 FR 26587) for public comment. The Waste Management EIS presented alternatives for the management of WVDP LLW, mixed LLW, TRU waste, and HLW. The DOE addressed public comments and issued the final Waste Management EIS in January 2004.

The DOE published its decision in the Federal Register (70 FR 35073) on June 16, 2005. The decision was to implement Alternative A, the preferred alternative, for the management of WVDP LLW and mixed LLW that are either currently in storage at the site or will be generated at the site over the next ten years. A decision on TRU wastes was deferred, contingent upon a determination by the DOE that the waste meets all statutory and regulatory requirements for disposal at the Waste Isolation Pilot Plant near Carlsbad, New Mexico. The HLW canisters remain in storage on site until they can be shipped directly to a geologic repository.

Facility maintenance, decontamination activities, and minor projects that supported HLW vitrification were documented and submitted for approval as CXs. Based on preliminary review of proposed activities for building removal, as part of infrastructure reduction at the WVDP, an EA was developed to evaluate potential effects on the environment.

• Environmental Assessment DOE/EA-1552 and FONSI. A DOE EA evaluating the proposed decontamination, demolition, and removal of unneeded facilities at the WVDP was finalized and signed on September 14, 2006.

The EA identified 36 facilities that are (or in the next four years will be) no longer required to safely monitor, maintain, or support future removal of the vitrified high-level radioactive waste, or the closure of other on-site facilities. The EA was circulated for review and comment to the state of New York and other interested stakeholders for a 30-day comment period ending July 29, 2006.

The DOE issued a FONSI, based on the analysis contained in the EA, thereby determining that the proposed action did not constitute a major federal action significantly affecting the quality of the human environment within the meaning of NEPA. As a result, an EIS was not required.

• Waste Characterization, Packaging, and Shipping. In 2005 and 2006, upgrades were made to several facilities and areas on site to support new or increased activities to prepare Class A, B, and C radioactive waste for off-site shipment. Characterization of waste streams (wastes that came from the same point of origin or that had similar physical characteristics) continued throughout 2006, and shipments took place by truck. Some truck shipments ultimately involved transloading to rail. Details pertaining to all shipments in 2006 are included in Table ECS-3.

Decommissioning and/or Long-Term Stewardship EIS at the WVDP and WNYNSC. The Nuclear Regulatory Commission (NRC) is authorized by the WVDP Act to prescribe decommissioning criteria for the WVDP. From 1998 until early 2002 the NRC worked to develop decommissioning criteria through a series of draft policy papers and public meetings. On February 1, 2002,

the NRC issued its "Decommissioning Criteria for the West Valley Demonstration Project (M-32) at the West Valley Site; Final Policy Statement" in the Federal Register (67 FR 5003). The Final Policy Statement applied the NRC's License Termination Rule (10 CFR Part 20, Subpart E) as the decommissioning criteria for the WVDP and as the decommissioning goal for the entire WNYNSC.

The DOE published an NOI on March 13, 2003 (68 FR 12044) announcing its intent to prepare, in cooperation with NYSERDA, the EIS for the Decommissioning and/or Long-Term Stewardship at the WVDP and the WNYNSC. The DOE and NYSERDA are joint lead agencies on this EIS, and the EPA, NRC, and NYSDEC are cooperating agencies. Work continued with the issuance of an internal multi-agency pre-decisional draft in September 2005. After a period of agency review, a large number of comments on the pre-decisional draft were received. These comments addressed a wide range of technical issues and challenges, some of which would not be readily resolved.

In August 2006, to continue progress with this process, the DOE-WVDP requested that the NRC, EPA, NYSDOH, NYSDEC, and NYSERDA participate in a collaborative process (i.e., Core Team) to resolve technical issues and make recommendations associated with the draft EIS. The Core Team began meeting in November 2006 and by the spring of 2007 all agencies were participating. The Core Team continues evaluating site challenges and making recommendations to move the focus of the Project forward.

Resource Conservation and Recovery Act (RCRA). RCRA and its implementing regulations govern the life cycle of hazardous waste from "cradle-to-grave" and mandate that generators take responsibility for ensuring the proper treatment, storage, and ultimate disposal of their wastes. The EPA is responsible for issuing guidelines and regulations for the proper management of solid and hazardous waste (including mixed [radioactive and hazardous] waste). In New York, the EPA has delegated the authority to issue permits and enforce these regulations to NYSDEC. In addition, the U.S. Department of Transportation is responsible for issuing guidelines and regulations for labeling, packaging, and spill-reporting for hazardous and mixed wastes while in transit.

There are several programs that are implemented at the WVDP under RCRA regulation, including:

- hazardous waste permitting
  - RCRA Part A Interim Status Application
  - RCRA Part 373-2 Application (i.e., Part B)
- RCRA 3008(h) Adminstrative Order on Consent
- hazardous waste management
- mixed waste management/site treatment plan/ Federal Facilities Compliance Act (FFCA)/FFCA agreement
- nonhazardous, regulated waste management
- waste minimization and pollution prevention
- New York State (NYS)-regulated underground storage tanks
- NYS-regulated aboveground storage tanks
- medical waste management

Discussion of the implementation of each of these programs, including status of compliance, is presented in the subsections that follow.

Hazardous Waste Permitting. A hazardous waste permit is required for facilities that treat or store

large quantities of hazardous waste for more than 90 days or dispose of hazardous waste at the facility. New York State facilities in existence on the date that hazardous waste regulations impacting their operations took effect were required to apply for interim status from NYSDEC by submitting a RCRA Part A Interim Status Application in accordance with Title 6 of the Official Compilation of Codes, Rules, and Regulations of the State of New York (6 NYCRR) Part 373-3. Facility operations during interim status are limited to those described in the Part A Application and must comply with the Interim Status Standards regulations.

RCRA Part A Interim Status Application. In 1984, the DOE notified the EPA of hazardous waste activities at the WVDP and identified the WVDP as a generator of hazardous waste. In June 1990, the effective date of the NYS regulations governing treatment, storage, and disposal of mixed waste (i.e., RCRA hazardous and Atomic Energy Commission radioactive), a RCRA Part A Application for the WVDP was filed with NYSDEC for storage and treatment of hazardous and mixed wastes. The WVDP has operated under interim status ever since.

The RCRA Part A Application is revised as changes to the site's interim status waste management operations occur. An update of the RCRA Part A Interim Status Application is currently under internal review. The Application was revised to incorporate NYSDEC-requested revisions, as well as revisions identified by the DOE. The changes in process, treatment, and storage were projected to be cost-effective and provide flexibility to manage wastes generated during future waste management activities at the WVDP.

RCRA Part 373-2 Permit. In a July 16, 2003 letter to the DOE, NYSDEC made an official request for the submittal of a Part 373-2 Permit Application (i.e., Part B) for the WVDP. The complete Part 373-2 Permit Application was transmitted to NYSDEC on December 23, 2004. This Application included RCRA closure plans for all interim status units that continued to be managed in accordance with 6 NYCRR Part 373-3 until a final determination by NYSDEC on the Part 373-2 Permit Application is made and a 6 NYCRR Part 373-2 permit is issued.

In 2002, prior to submittal of the Part B Permit Application, the WVDP submitted interim status closure plans for the HLW tanks 8D-1 and 8D-2, the supernatant treatment system, and the vitrification facility to NYSDEC. NYSDEC responded that the closure plans did not properly address RCRA clean closure requirements. No comments were received on the vitrification facility closure plan. A revised closure plan for the vitrification facility and two additional closure plans (one for the lag storage addition #1 [LSA #1] and LSA #2 hardstand, and the other for the interim waste storage facility [IWSF]) were submitted in December 2004 (separate from and prior to the submittal of the Part B Permit Application).

In April 2005, the DOE transmitted nine revised RCRA hazardous waste closure plans. The closure plans were transmitted in anticipation of implementing interim status unit closure activities in 2006 for one or more of the permitted units.

The DOE subsequently resubmitted revised closure plans to NYSDEC for eight of the original nine hazardous waste management units in a letter dated May 3, 2006. They were provided for agency review and to confirm that the respective units were planned for closure after 2005 and prior to site decommissioning EIS starting point. The reasons for the revisions were mainly administrative — to provide separate and distinct closure plans for each individual hazardous waste management unit. The previous versions of the respective closure plans covered multiple units.

NYSDEC provided comments on the lag storage building (LSB) closure plan in a letter dated May 10, 2006. The DOE responded to NYSDEC's comments and provided a revised closure plan for the LSB in a letter dated June 30, 2006. In addition, the DOE revised the closure plan for the IWSF and submitted it to NYSDEC in a letter dated October 23, 2006 (after the completion of clean closure activities discussed in the following paragraph).

After issuance of the FONSI and DOE/EA-1552, the WVDP initiated clean closure of the IWSF and the LSB. Decontamination and demolition of both facilities was completed between June and November 2006. Activities included notifying NYSDEC of closure, removal of the waste, decontamination of the impacted areas, clean closure confirmation sampling, sample analysis, sample result evaluation, and preparation of a clean closure certification report.

The results of the clean closure confirmation sampling at the IWSF and the LSB showed levels of contaminants of concern below the cleanup levels established in the closure plans. The remaining concrete slabs are currently isolated with barriers, ropes, and postings, and will remain unavailable for use until the closure has been approved by NYSDEC.

LSA #1 was also demolished. This included the removal of all wastes (radioactive) and demolition of the aboveground structure. Although LSA #1 was filed as a hazardous/mixed waste management area under the RCRA Part A Interim Status Application, it was used only to store radiological waste and was never used for storage or management of hazardous or mixed waste. A closure certification report is being prepared to document that this unit was not used to manage hazardous/mixed waste.

In summary, closure plans were submitted to NYSDEC for most of the interim status units. NYSDEC comments on the closure plans will be addressed as they are received.

RCRA §3008(h) Administrative Order on Consent. The DOE and NYSERDA entered into a RCRA §3008(h) Administrative Order on Consent (the Consent Order) with NYSDEC and the EPA in March 1992. The Consent Order required NYSERDA and the DOE's WVDP office to conduct RCRA-facility investigations (RFIs) at on-site solid waste management units (SWMUs) to determine if there had been a release or if there was a potential for release of RCRA-regulated hazardous constituents from SWMUs.

Because many SWMUs are contiguous, or so close together as to make their separate monitoring impractical, many SWMUs have been grouped into larger units, referred to as super SWMUs (SSWMUs). This terminology is unique to the WVDP, and is not an official regulatory term. Descriptions of the SSWMUs, with the associated constituent SWMUs, as well as the individual SWMUs, can be found in Table ECS-4. Figures A-9 and A-10 in Appendix A show the locations of the WVDP SSWMUs.

The final RFI reports were submitted in 1997, completing the investigative activities associated with the Consent Order. No corrective actions were required at that time as a result of the RFIs.

Groundwater monitoring, as recommended in the RFI reports and approved by the EPA and NYSDEC, continued during 2006 in compliance with the requirements of the Consent Order. Groundwater monitoring results are presented in Appendix E[CD] and discussed in Chapter 4.

A report entitled "West Valley Demonstration Project Solid Waste Management Unit Assess-

ment and Current Conditions Report" was submitted to NYSDEC in November 2004. This report summarized the historic activities at individual SWMUs and provided environmental monitoring data and information on site activities performed since the completion of the RFI reports.

After reviewing this report, NYSDEC determined that corrective measures studies (CMSs) pursuant to the Consent Order were required for select SWMUs at the WVDP. After discussions between the DOE and NYSDEC, the DOE submitted to NYSDEC a draft "Corrective Measures Study Work Plan for the West Valley Demonstration Project" in August 2005 to address CMS requirements for six of the SWMUs. Closure of two SWMUs was deferred to closure under State Pollutant Discharge Elimination System (SPDES) requirements. Two subsequent revisions to the work plan, containing CMS requirements for the six SWMUs, were submitted in 2006 in response to NYSDEC comments. NYSDEC provided the DOE a conditional approval of the work plan in October 2006, and the DOE is modifying the work plan to address NYSDEC's conditions.

Concurrently, the DOE prepared five draft CMS reports for the six SWMUs. Two separate SWMUs (the NRC-Licensed Disposal Area [NDA] and the NDA Interceptor Trench) were written into one CMS. The reports are currently under internal review.

Hazardous Waste Management. Hazardous wastes at the WVDP are managed in accordance with 6 NYCRR Parts 370–374 and 376. Hazardous and mixed waste activities are reported to NYSDEC annually in the WVDP's Annual Hazardous Waste Report, which specifies the quantities of waste generated, treated, and/or disposed of, and identifies the treatment, storage, and disposal facilities used. The Annual Hazardous Waste Report for 2006 was submitted to NYSDEC on February 26, 2007.

Additional reports are submitted each year to document hazardous waste reduction efforts. Pursuant to Section 27-0908 of NYS Environmental Conservation Law (ECL), the WVDP must annually update its Hazardous Waste Reduction Plan. The updates to this plan are submitted to NYSDEC in two forms which differ slightly in scope. The plan is updated biennially to reflect changes in the types and amounts of hazardous wastes generated at the WVDP. The biennial update to the Hazardous Waste Reduction Plan for CY 2006 was submitted to NYSDEC on June 20, 2007. Every other year, the Annual Status Report is submitted, which is essentially an abbreviated version of the biennial update. The most recent Annual Status Report was submitted to NYSDEC on June 28, 2006 and was approved by NYSDEC on July 12, 2006.

Inspections to assess compliance with hazardous waste regulations were conducted by NYSDEC in both March and October 2006. No deficiencies were noted.

Mixed Waste Management/Site Treatment Plan/ FFCA/FFCA Agreement. Mixed waste contains both a radioactive component, regulated under the Atomic Energy Act, and a hazardous component, regulated under RCRA.

The Federal Facilities Compliance Act of 1992, an amendment to RCRA, requires DOE facilities to prepare a Site Treatment Plan (STP) for treating mixed waste inventories to meet land disposal restrictions and to update the plan annually to account for development of treatment technologies, capacities, and changes in mixed waste inventories. Each plan is approved by the respective state agency or the EPA after consultation with other affected states and after consideration of public comments.

The WVDP STP is comprised of two volumes: the Background Volume (that provides information on each mixed waste stream and its preferred treat-

ment method) and the Plan Volume (that includes schedules for treating the mixed waste to meet RCRA land disposal restriction requirements).

The DOE entered into a Consent Order with NYSDEC for the WVDP on August 27, 1996 that requires completing milestones identified in the Plan Volume. The Plan is updated annually to bring waste stream, inventory, treatment, and milestone information current through September 30, the end of the DOE fiscal year (FY). The Site Treatment Plan FY 2006 Update was issued in February 2007. There were a total of nine proposed milestones for waste streams managed under the WVDP STP and all were completed successfully by the end of FY 2006.

Mixed waste was shipped to approved treatment and disposal facilities from the WVDP in 2006, as summarized in Table ECS-3.

Nonhazardous, Regulated Waste Management. Nonradioactive, nonhazardous material was shipped off site to solid waste management facilities in 2006. Certain components of this waste (lead-acid batteries and spent lamps [universal wastes]) were reclaimed or recycled at off-site, authorized reclamation and recycling facilities. Digested sludge and treated wastewater from the site sanitary and industrial wastewater treatment facility were shipped to the Buffalo Sewer Authority for disposal. Quantities of nonhazardous wastes handled in 2006 are summarized in Tables ECS-3 and ECS-5.

Waste Minimization and Pollution Prevention. In 2006, WVNSCO continued a long-term program to minimize the generation of LLW, mixed waste, hazardous waste, industrial waste, and sanitary waste, and to promote affirmative procurement as directed by Executive Orders (E.O.s) 13101 and 13148. The Affirmative Procurement Program specifies responsibilities and direction for federal agencies in acquiring recycled and environmentally preferable products and services as designated by the EPA in Title 40 of the Code of Federal Regulations (CFR) Part 247, "Comprehensive Procurement Guideline for Products Containing Recovered Material." WVNSCO annually reports to the DOE the challenges and successes associated with the purchase and use of these materials and services. WVNSCO also submits an annual pollution prevention report to the DOE summarizing recycling and waste generation information. See Table ECS-5, "Pollution Prevention Progress for FY 2006."

New York State-Regulated Underground Storage Tanks. RCRA regulations cover the use and management of underground tanks for storage of petroleum and hazardous substances and establish minimum design requirements to protect groundwater resources from releases. The regulations, specified in 40 CFR Part 280, require underground storage tanks to be equipped with overfill protection, spill prevention, corrosion protection, and leak-detection systems. New tanks must comply with regulations at the time of installation. In addition, 40 CFR 112 addresses the requirements of a spill prevention control and countermeasure (SPCC) plan for the management of oil discharged from tanks, lines, and associated transfer activities.

New York State also regulates underground storage tanks through two programs: petroleum bulk storage (6 NYCRR Parts 612–614) and chemical bulk storage (6 NYCRR Parts 595–599). State registration and minimum design requirements are similar to those of the federal program, except that petroleum tank fill ports must be color-coded using American Petroleum Institute standards to indicate the product being stored.

A single 550-gallon, double-walled, steel underground storage tank, upgraded in 1998 to bring it into compliance with the most recent EPA require-

ments (40 CFR Part 280.21), is used to store diesel fuel for the supernatant treatment system/permanent ventilation system standby power unit. This tank is equipped with aboveground piping, an upgraded interstitial leak-detection system, and a high-level warning device, and therefore meets the state requirements of 6 NYCRR Parts 612–614. This is the only underground petroleum storage tank currently in use at the WVDP. (There are no underground chemical bulk storage tanks at the WVDP.)

A former underground petroleum storage tank, closed in place before the NYS underground storage tank program closure requirements were implemented in 1985, was removed in 1997. In accordance with a stipulation agreement with NYSDEC, a soil bioventing system was installed in August 1999 to remediate localized petroleum-contaminated soils in the vicinity of the tank. The system stimulated natural in-situ biodegradation of petroleum hydrocarbons in the soil by providing an abundant oxygen supply to existing soil microorganisms within the contaminated soil zone. Soil and groundwater samples were collected in 2002 to evaluate the level of remediation achieved. Based on the sample results, NYSDEC determined that no further remediation was required. Final disposition is pending the Decommissioning and/or Long-Term Stewardship EIS.

New York State-Regulated Aboveground Storage Tanks. New York State regulates aboveground petroleum and chemical bulk storage tanks under 6 NYCRR Parts 612–614 and Parts 595–599, respectively. These regulations require secondary containment, external gauges to indicate the content levels, monthly visual inspections of petroleum tanks, and documented daily, annual, and five-year inspections of chemical tanks. Documentation relating to these periodic inspections is maintained at the WVDP and is available for regulatory agencies to review. Petroleum tank fill ports also must be color-coded, and chemical tanks must be labeled to indicate the product stored. Petroleum bulk storage is also addressed through the WVDP's SPCC plan prepared in accordance with 40 CFR 112.

Tank registration for the WVDP at the end of 2006 included nine aboveground petroleum tanks (five containing diesel fuel, three containing #2 fuel oil, and one containing unleaded gasoline).

An aboveground hazardous bulk chemical storage tank in the vitrification test facility was the last remaining chemical bulk storage tank on the WVDP registration. The tank, once containing a nitric acid mixture, was permanently closed in 2006 under the Chemical Bulk Storage Regulations in 6 NYCRR Parts 595–599.

The most current inspections by NYSDEC confirmed that the petroleum storage tanks were in compliance with NYS regulations.

Medical Waste Management. Contact with medical waste can potentially expose humans to infectious diseases and pathogens from bodily fluids. Medical evaluations, inoculations, and laboratory work at the on-site Health Services office regularly generate potentially infectious medical wastes that are securely maintained in approved containers in accordance with NYSDEC requirements (6 NYCRR Part 364.9). Volume was minimal in 2006, therefore no medical waste was shipped (as summarized in Table ECS-3).

Clean Air Act (CAA). The CAA establishes a framework for the EPA to regulate air emissions from both stationary and mobile sources. Amendments to the CAA mandate that each state establish a program to regulate operation of sources of air pollution. In New York, NYSDEC implements the requirements of the EPA CAA Title V permitting process through 6 NYCRR Parts 200, 201, 231,

and 621. A listing of air permits in effect at the WVDP can be found in Table ECS-2. Table ECS-6 presents the air quality noncompliance episodes for the WVDP in 2006. As shown in Table ECS-6, no air quality noncompliances were noted in 2006.

Radiological Emissions. Emissions of airborne radionuclides are regulated by the EPA under 40 CFR 61, National Emission Standards for Hazardous Air Pollutants (NESHAP), Subpart H, National Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities. The DOE currently holds permits for six point sources of radionuclide emissions at the WVDP. In 2006, stack systems in use for potential major emission points were inspected in accordance with 40 CFR 61, Appendix B, Method 114. Visual inspections, leak checks, and cleaning were carried out, as appropriate.

Monitoring results from sampling of permitted and nonpermitted air emission points (i.e., those points that, due to the low potential for release of radionuclides, do not require permitting), are presented in Appendix D[CD] and discussed in Chapter 2.

Results from sampling of airborne releases, estimates of releases from sources that do not require sampling, and estimates of releases from diffuse sources (such as the lagoon system) are used to estimate dose from the WVDP to the maximally exposed off-site individual. Estimated doses are summarized in annual NESHAP reports that are submitted to the EPA by June 30th of the following calendar year (CY).

Estimated CY 2006 dose attributable to air emissions from the WVDP was approximately 1.1E-03 millirem (mrem), 0.011% of the 10-mrem NESHAP standard. (See Tables 2-3 and 2-6 for additional information regarding airborne radiological releases and estimated dose from WVDP air emissions.)

Nonradiological Emissions. Nonradiological point sources of air emissions are regulated by NYSDEC. NYSDEC issues permits for stationary sources (e.g., stacks, ducts, vents) that emit regulated hazardous air pollutants if quantities released are above a predetermined threshold. Major source facilities are required by 6 NYCRR Part 201 to file a Title V Permit Application unless emissions are capped below threshold limits. The DOE submitted and received NYSDEC's approval of a plan for capping WVDP annual airborne releases of oxides of nitrogen (NO_x) and sulfur dioxide (SO_2) at 49.5 tons each. Releases in 2006 were about 6.3% and 0.002%, respectively, of the capping limits for each. Therefore, there were no nonradiological air permit regulatory exceedances in 2006.

Two utility steam boilers are the remaining Project contributors of NO_x and SO_2. These sources are operated and monitored as required by the NYSDEC Air Facility Registration Certificate, as modified on March 22, 2005. The certificate was issued in accordance with 6 NYCRR Part 201-4 ("Minor Facility Registrations"). No major sources of nonradiological air pollutants, as defined in 40 CFR Part 70.2, are present at the WVDP.

Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA (also known as Superfund Amendments and Reauthorization Act [SARA] Title III) was designed to create a working partnership between industry, business, state and local governments, public health and emergency response representatives, and interested citizens. EPCRA is intended to address concerns about the effects of chemicals used, stored, and released in local communities.

E.O. 13148 requires all federal agencies to comply with the following EPCRA provisions if certain thresholds are exceeded: planning notification (Sections 302–303), extremely hazardous substance (EHS) release notification (Section 304),

material safety data sheet (MSDS)/chemical inventory (Sections 311–312), and toxic release inventory (TRI) reporting (Section 313). Compliance with these provisions continued at the WVDP in 2006, as summarized below and in Table ECS-7.

• WVDP representatives participated in semiannual meetings of the Cattaraugus County Local Emergency Planning Committee (EPCRA Sections 302–303). WVDP representatives also attended meetings held by the Cattaraugus and Erie County Emergency Management Services concerning WVDP and other local emergency planning activities. Area hospitals and the West Valley Volunteer Hose Company continued to participate in on-site briefings, emergency response exercises, and information exchanges concerning hazardous substance management at the WVDP. The WVDP representatives continue to interface with off-site organizations with which Memoranda of Understanding or Letters of Agreement exist. These organizations are annually provided an opportunity to participate in a site tour and update to better understand on-site hazards for emergency response purposes.

On October 19, 2006, a WVDP Transportation Event Management Organization exercise, simulating a transportation accident, was held to test emergency response readiness. The exercise was held in the evening, with foul weather and heavy rain, and involved a simulated vehicular accident involving two cars and a waste truck from the WVDP. The WVDP organization members, including radiation protection, WVNSCO and DOE senior management, public relations, and waste management, were joined in the exercise by volunteer responders from the Cattaraugus County HazMat Team, West Valley Volunteer Hose Company, Springville Volunteer Fire Department, Machias Volunteer Fire Department, and Bertrand Chaffee Hospital. Feedback from the exercise debrief session was positive.

• There were no releases of EHS at the WVDP in 2006 that triggered the release notification requirements of EPCRA Section 304.

• Under EPCRA Section 311, WVDP personnel are required to review information about reportable chemicals every quarter. If a hazardous chemical not previously reported is present on site in an amount exceeding the threshold planning quantity, an MSDS and an updated hazardous chemical list are submitted to the state and local emergency response groups. This supplemental reporting ensures that the public and emergency responders have current information about hazardous chemicals at the WVDP. No new chemicals were added to the hazardous chemicals list in 2006 and no additional EPCRA Section 311 notifications were required.

• Under EPCRA Section 312 regulations, annual reports are submitted to state and local emergency response organizations and fire departments specifying the quantity, location, and hazards associated with chemicals stored at the WVDP. In 2006, nine reportable chemicals were stored at the WVDP above threshold planning quantities. These chemicals are listed in Table ECS-8.

• Under EPCRA Section 313, information must be provided about releases to all environmental media (e.g., air, water) of EPA-listed TRI chemicals used at or above specified regulatory thresholds at the WVDP. In 2006, no chemical exceeded the reporting threshold for the EPCRA Section 313 report.

Clean Water Act (CWA). Section 404 of the CWA regulates the development of areas in and adjacent to the waters of the United States. Supreme Court interpretations of Section 404 have affirmed the inclusion of certain nonisolated wetlands in the regulatory definition of waters of the United States. Section 404 regulates the disposal of solids, in the form of dredged or fill material,

into these areas by granting the USACE the authority to designate disposal areas and issue permits for these activities. E.O. 11990 directs federal agencies to "avoid to the extent possible the long- and short-term adverse impacts that destroy or modify wetlands." Article 24 of the NYS ECL also contains requirements for the protection of freshwater wetlands and adjacent buffer areas.

Section 401 of the CWA requires applicants for a federal permit (required by Section 404) to obtain certification from the host state that the proposed discharge complies with effluent- and water-quality-related limitations, guidelines, and national standards of performance, identified under Sections 301–303, 306–307, and 511(c) of the CWA. The EPA delegated administration of this program to NYS for activities within New York.

Section 402 of the CWA regulates process, sanitary, certain storm water, and other effluent discharges to surface waters. Regulated storm water discharges include those that receive runoff from areas where industrial, construction, or demolition activities are performed. Administration of Section 402 in New York is delegated to NYSDEC, which, under NYS ECL, also regulates discharges to groundwater.

The WVDP ensures compliance with the CWA and the NYS ECL regulating wastewater and storm water discharges through implementation of several programs and activities as follows:

- assessment and protection of wetlands
- State Pollutant Discharge Elimination System (SPDES) permit
- storm water discharge monitoring
- NYSDEC SPDES inspections
- process sewer integrity evaluation
- north plateau groundwater remediation and monitoring
- petroleum and chemical product spill control and reporting.

Discussion of these activities and programs with regard to their achievement of regulatory compliance is presented in the subsections that follow.

Assessment and Protection of Wetlands. Jurisdictional wetlands are defined in Section 404 of the CWA as those satisfying specific technical criteria related to vegetation, soils, and hydrologic conditions. The DOE notifies the USACE and NYSDEC of proposed actions that could affect wetland units not specifically exempted from regulation or notification.

Wetland field assessments are periodically performed and wetland maps revised accordingly, with the most recent assessment and mapping completed in 2004. This assessment identified the presence of 68 jurisdictional wetlands that range in size from 0.01 acres to 7.3 acres and cover approximately 36.5 acres within and adjacent to the WVDP premises. NYSDEC approved this wetland delineation report in December 2005. The USACE performed a field assessment and review of applicable topographic and wetland maps of the area on November 2, 2005. It was determined that 34.09 acres of wetland are waters of the United States subject to regulation under Section 404 of the CWA. The remaining 2.43 acres are considered to be isolated, nonnavigable, intrastate water that is not subject to regulation under Section 404. These Federal wetland boundaries were confirmed on January 26, 2006 by the USACE.

SPDES Permit. New York State is delegated by the EPA to administer the National Pollutant Dis-

charge Elimination System (NPDES) under an equivalent state program. At the WVDP, NYSDEC regulates point-source liquid effluent discharges to surface waters of NYS under the SPDES permit.

NYSDEC issued a modified SPDES permit for control of discharges of treated process and sanitary wastewater and storm water, effective September 1, 2006. The new implementation requirements resulted in:

• Minimum monitoring frequencies for 17 analytical parameters for outfall 001 were reduced.

• The pH limit for storm water runoff being dropped; the requirement was reduced to monitoring only.

• A permit modification that eliminated the requirement to use EPA Method 245.1 for mercury analysis. NYSDEC incorporated a policy change for the control of mercury that added a requirement to use only "ultra-clean" EPA Method 1631 for detection of low-level total mercury for compliance monitoring and reporting at outfalls 001 and 01B. As a result, the requirement to submit a comparison study report between methods 1631 and 245.1 was eliminated.

• The enforcement discharge compliance limit reporting units for total mercury concentration being changed from 0.2 micrograms per liter (µg/L) to 200 nanograms per liter (ng/L) at outfall 001 and from 10 µg/L to 10,000.0 ng/L at outfall 01B. The concentration limits were unchanged, but reporting units were changed from µg/L to ng/L and the number of significant digits was increased.

As shown on Figure ECS-1, the annual number of effluent limit exceptions to requirements in the site's SPDES permit has been substantially reduced over time, especially when compared to the peak of 35 exceptions noted in 1986. As indicated on this figure, there were no permit effluent limit exceptions recorded during 2006. (See also Table ECS-9.)

The compliance points for monitoring discharges to Buttermilk Creek tributaries, including Erdman

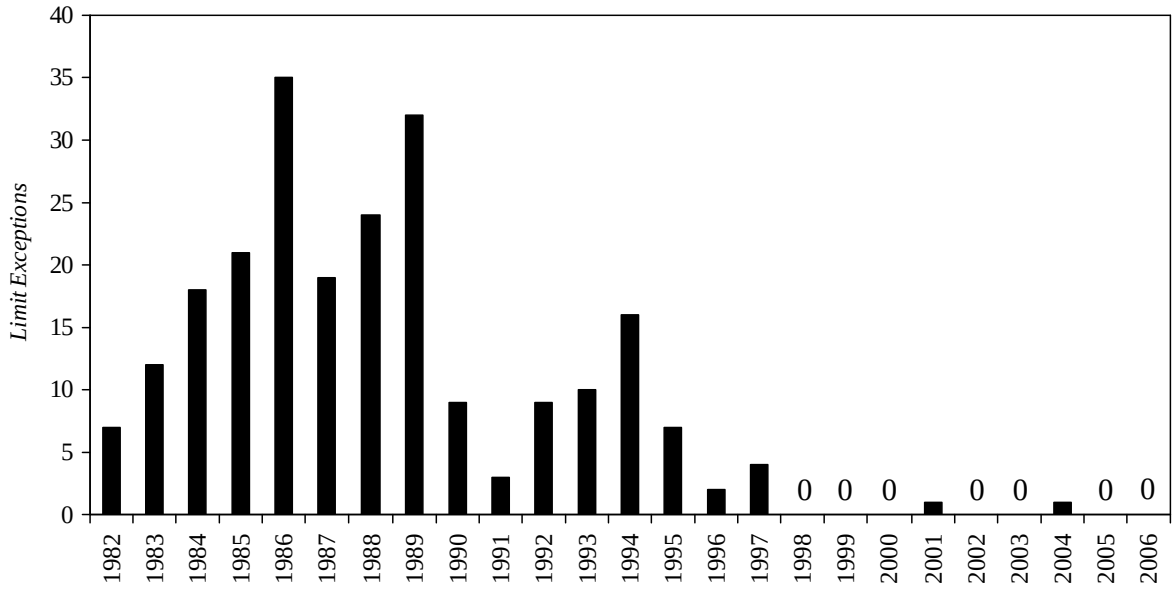

Figure ECS-1. WVDP SPDES Effluent Limit Exceptions

Brook, Frank's Creek, and Quarry Creek, are shown on Figures A-2, A-3, and A-4. The routine monitoring points and the storm water monitoring points are described in Appendix B[CD]. Monitoring results for 2006 are presented in Appendix C[CD] and discussed in Chapter 3.

In February 2006, proposed modifications to the SPDES Permit were submitted to NYSDEC, and thereafter issued for public comment. The proposed modification requested by the DOE will be to reduce monitoring frequency at outfall 007 from three times per month to twice per month. Reduction in site population and pollutant loading, as well as in-depth knowledge of the system over more than ten years, support the rationale to reduce the sampling frequency. It is also proposed to remove two storm water outfalls (S02 and S40) from the permitted sampling plan. The site storm water drainage configuration has changed and these outfalls no longer exist.

Storm Water Discharge Monitoring. The NPDES Permit Application Regulations for Storm Water Discharges, Final Rule (40 CFR Parts 122, 123, and 124, as amended), and as expressed in Section 403(p) of the CWA, require that specified facilities acquire NPDES permits for storm water discharge associated with industrial activities. Permitted or interim status RCRA hazardous waste treatment, storage, and disposal facilities are specifically defined as being associated with industrial activity in the regulations (40 CFR Part 122.26[a][14][iv]).

Since the WVDP is an interim status RCRA facility, storm water discharges from the WVDP qualify as being associated with industrial activity. Six other groups of activities at the WVDP are also subject to storm water permitting: 1) aboveground container storage; 2) aboveground and underground tank storage; 3) belowground waste burial; 4) haul roads and railway lines; 5) liquid waste treatment facilities; and 6) construction activities.

There are currently 20 permitted storm water outfalls that are representative of eight drainage basins (or groups) on the WNYNSC premises. Permit requirements were achieved in 2006 by successfully sampling and analyzing a minimum of one outfall per drainage basin during each semi-annual period of the calendar year. All outfalls were successfully sampled during qualifying storm events according to NYSDEC requirements. See Chapter 3 for a discussion of the storm water analytical results and Appendix C[CD] for a listing of the data.

NYSDEC SPDES Inspection. In March 2006, NYSDEC performed an inspection of the SPDES program. Also in March 2006, Empire GEO-Services, Inc. had reported the results of a stability analysis of the Lagoon 3 embankment performed by a NYS-licensed Professional Engineer (PE). The analysis summarized the measures being used to ensure the stability of the embankment and confirmed the original (1991) safety analysis. In November 2006, NYSDEC completed a SPDES inspection that included an examination of the condition of the embankment. No deficiencies were noted. During the November inspection, NYSDEC requested, and was later provided with, a copy of the March 2006 stability analysis report.

Process Sewer Integrity Evaluation. Video inspection of camera-accessible process sewer lines was initiated in 2003. During this inspection, a hole was discovered in a tributary line allowing laundry wastewater to discharge to subsurface soil. The breached line was removed from service and laundry wastewater was diverted to another line with known integrity. Reports of this discovery were filed with NYSDEC in 2003. Video inspection of process sewer lines was completed and the final report was submitted to NYSDEC in the fall of

2004. On February 17, 2005, the DOE transmitted a summary report to NYSDEC and the EPA for this SWMU (Breach in Laundry Wastewater Line).

A NYS-licensed PE performed an integrity evaluation of the process sewer system and prepared a final report that identified five future actions to be implemented. Work was initiated to implement these recommendations, three of which were performed immediately upon the receipt of the report from the PE. The fourth recommendation was to complete integrity testing of underground lines used to convey strontium-90-contaminated groundwater extracted from the north plateau. The pressure testing to assure sewer integrity was completed on August 17, 2006. Retesting was then scheduled to be done annually as part of the preventative maintenance program. The last recommendation, to perform routine cleaning and re-inspection of accessible main service lines and operational clean-out risers, is to be fully implemented by November 2009.

North Plateau Groundwater Remediation and Monitoring. In November 1995, the north plateau groundwater recovery system (NPGRS) was installed at the WVDP to limit the advance of the plume's main western lobe and remove strontium-90 from the processed groundwater. The NPGRS continued operations throughout 2006 and was closely monitored. In 1999, a pilot-scale permeable treatment wall (PTW) was installed to test in-situ passive technology for treating contaminated groundwater. The pilot PTW covered a limited portion of the strontium-90 groundwater plume. The plume has since encircled and migrated past the PTW test area. The complex geology that exists in the vicinity of the pilot PTW is believed to affect the performance of the wall, and the wall itself may be affecting the pattern of groundwater flow in the plume area. Sufficient data have been obtained to determine the effectiveness of the PTW technology. (See "North Plateau Groundwater Recovery System" and "Permeable Treatment Wall" in Chapter 4.)

Sampling and analysis plans to further characterize and evaluate the north plateau strontium-90 plume area are currently under review. In late 2006, the DOE submitted to NYSDEC a draft "Sampling and Analysis Plan for Characterization of the North Plateau Plume Area" and a draft "Sampling Plan for Background Subsurface Soil Data on the North Plateau."

Petroleum- and Chemical-Product Spill Control and Reporting. The objective of the spill notification and reporting program for the WVDP is to ensure that all spills are properly managed, documented, and remediated in accordance with applicable regulations. This policy identifies departmental responsibilities for spill management and proper spill-control procedures and stresses the responsibility of each employee to notify the plant systems operations shift supervisor when a spill is discovered. This first-line reporting requirement helps to ensure that spills are properly evaluated and managed.

Under the terms of a 1996 agreement with NYSDEC, amended in 2005, the DOE is not required to report a spill of petroleum products onto an impervious surface if the spill is less than 5 gallons (19 liters) and is cleaned up within two hours of discovery. Any spill of 5 gallons or less onto the ground is entered into a petroleum spill log that is submitted quarterly to NYSDEC.

A spill of more than 5 gallons on any surface must also be logged, and reported within two hours to the NYSDEC hotline. A spill of any amount that enters state waters must be reported to the NYSDEC hotline within two hours of discovery and, if it has reached navigable state waters, also reported to the National Response Center. No such spills occurred at the WVDP in 2006.

The WVDP operators are also required to report spills or releases of hazardous substances in accordance with reporting requirements of RCRA, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (if a reportable quantity has been exceeded), the CAA, EPCRA, CWA, and Toxic Substances Control Act (TSCA). No chemical spills or releases exceeded reportable quantities and, thus, no such reporting during CY 2006 was required.

Safe Drinking Water Act (SDWA). Drinking water for the WVDP is obtained from surface water reservoirs on the WNYNSC. The WVDP system is considered a nontransient, noncommunity public water supply. The WVDP's drinking water treatment facility purifies the water by clarification, filtration, and chlorination before it is distributed on site. To ensure compliance with the SDWA, monitoring, reporting, and cross-connection control activities are routinely conducted and documented.

Monitoring and Reporting. Samples from the WVDP drinking water system are periodically collected and tested for various water quality parameters. (See Appendix B CD for a description of sampling frequency and analytical constituents and Appendix C-6 CD for a listing of 2006 test results.) Test results are reported monthly to the Cattaraugus County Health Department, which also independently collects and analyzes a monthly sample of WVDP tap water to determine bacterial and residual chlorine content, and an annual tap water sample for nitrate (as nitrogen). All test results were within drinking water limits in 2006.

Cross-Connection Control. The SDWA requires that public water suppliers prevent cross-connections between the potable water supply and systems containing hazardous or infectious substances. Cross-connection control devices, such as double check valves and reduced-pressure zone valves, must be installed, inspected, and maintained at strategic locations at facilities where hazardous materials are used in a manner that could result in their introduction into the potable water distribution system under low pressure conditions. The WVDP has a total of 13 backflow prevention devices, all of which were tested and repaired as necessary by a NYSDOH-licensed tester in 2006 to ensure that all devices were functioning properly.

Toxic Substances Control Act. TSCA regulates the manufacture, processing, distribution, and use of chemicals, including asbestos-containing material (ACM) and polychlorinated biphenyls (PCBs).

Asbestos-Containing Material. In 2006, continued compliance was maintained with all TSCA requirements pertaining to asbestos by managing ACM in accordance with the site "Asbestos Management Plan." This plan includes requirements for limiting worker exposure to ACM and for asbestos-abatement projects, maintenance activities, and periodic surveillance inspections (at least once every three years). This plan also identifies the inventory and status of on-site ACM.

Activities in 2006 included a substantial amount of demolition. Notification of demolition was submitted to the EPA Region 2 Asbestos NESHAP Coordinator for the LSA #1 tent, north training platform, 02 building, maintenance storage area, IWSF, LSB, sample storage and packaging facility, fabrication shop, radwaste process (Hittman) building, recirculation vent system, cold chemical facility, and abandoned outdoor boiler removal project. Surveys were conducted of each structure/facility by a certified asbestos inspector to identify asbestos concerns. ACMs were present in the recirculation vent system building and the 02 building, which had nonfriable asbestos-containing built-up roof systems. This ACM was subsequently removed prior to the building demolition. Also, approximately 350 linear feet of asbestos-containing pipe insulation and approximately 50

square feet of vessel insulation were removed from piping associated with two abandoned outdoor boilers. The ACM was managed in strict accordance with the asbestos management plan.

Maintenance of signs and labels to protect workers was also performed during all activities associated with ACM. All ACM activities were completed by personnel certified by the New York State Department of Labor (NYSDOL). WVNSCO maintains an asbestos-handling license issued by NYSDOL. (See Table ECS-2.)

Effective September 5, 2006, NYSDOL significantly revised the asbestos regulations, cited as 12 NYCRR Part 56. As a result of these regulatory changes, WVNSCO revised its operating procedures, conducted special training for the site asbestos workers, and applied for and was granted site-specific variances, as necessary.

Polychlorinated Biphenyls. Because PCBs are regulated as a hazardous waste in NYS, the DOE continued in 2006 to manage radioactively contaminated PCB waste as mixed waste and nonradioactive PCB waste as hazardous waste. Details concerning PCB-contaminated radioactive waste management, including a description of the waste, proposed treatment technologies, and schedules, can be found in the "Site Treatment Plan, Fiscal Year 2006 Update."

To comply with TSCA and PCB regulations, all activities involving the management of PCBs are done in strict accordance with the site "PCB and PCB-Contaminated Material Management Plan." The WVDP operators maintain an annual document log that details PCB use, appropriate on-site storage, and any changes in storage or disposal status. The WVDP also complies with regulations for disposal of PCBs, which conditionally allow radioactive and nonradioactive PCBs to be stored for more than one year (40 CFR Parts 750 and 761).

Federal Insecticide, Fungicide, and Rodenticide Act. Title 7, Chapter 6 of the United States Code contains regulations for environmental pesticide control. In 2006, approximately 350 pounds (160 kilograms) of a NYSDEC-registered biocide were applied by NYSDEC-licensed commercial pesticide applicators to control algae and waterborne pathogens in the site cooling water tower system. Control of the organisms is necessary to minimize the potential for cooling system damage due to fouling from algae buildup and minimize the potential for worker exposure to waterborne pathogens such as *Legionella*.

Environmental Conservation Law - Structures Impounding Waters and Structures in Waters. Title 5 of the NYS ECL contains regulations governing the protection and safety of dams in New York. Under the ECL, two site earthen dams, which form the site water supply, must be inspected and maintained to minimize the potential for uncontrolled releases of the impounded water. In April 2006, the dams, including the grass cover, were inspected and properly maintained in accordance with NYSDEC regulations and guidelines to prevent soil exposure to erosive forces of storm water runoff and other methods of structural failure.

Current Achievements and Program Highlights

The Decommissioning, Decontamination, Dismantlement, and Demolition (D4) Project. As part of the D4 Project efforts, obsolete buildings, systems, and components were identified, taken apart, packaged, and shipped off site for disposition, as appropriate. Projects in the main plant (the former nuclear reprocessing facility) and across the site included removal of the old utility room boilers, dismantlement of the cement solidification system, removal of the fuel receiving and storage decontamination station, and cleanout and refurbishment of the former vitrification chemis-

try laboratory. (See Chapter 1 for more information on D4 Projects.)

Environmental Assessment. The issuance of DOE/EA-1552 and the associated FONSI cleared the way for decontamination, demolition, and removal of 36 WVDP structures that were deemed obsolete. In 2006, 11 of these 36 structures were removed. Demolished facilities included the LSA #1 tent, the north training platform, the 02 building, the maintenance storage area, the IWSF, the LSB, the sample storage and packaging facility, the fabrication shop, the radwaste process (Hittman) building, the recirculation vent system building, and the cold chemical facility. Removal of these facilities, in addition to increasing "green space" on site, will reduce the demand on resources required to maintain the obsolete structures.

Waste Management Activities. In 2006, materials stored in a number of on-site areas were sorted, consolidated, recycled, reused, or disposed. Demolition debris, excess items, and legacy radioactive and nonradioactive waste accounted for approximately 225,000 cubic feet (6,400 cubic meters) of waste that was eliminated from the WVDP in 2006. That amount, combined with the waste removed from the main plant, brought the total amount of waste dispositioned in 2006 to about 400,000 cubic feet (11,300 cubic meters). (See Table ECS-3 for further breakdown of waste types.)

DOE-VPP STAR Status. In 2006, WVDP employees were responsible for extending the record for the site consecutive safe work-hours to 4.58 million, spanning a period of more than four years.

WVDP STAR status in the DOE Voluntary Protection Program (VPP) underwent DOE review in 2006. In recognition of excellent safety and health performance, the DOE recertified the WVDP the VPP designation as a STAR site on June 1, 2006. (Also see "Voluntary Protection Program [VPP] STAR Status" in Chapter 1.)

EPA National Environmental Performance Track. The WVDP was recognized as a top environmental leader in 2000 and was accepted into the EPA's National Environmental Performance Track. The WVDP was designated as a Charter Member as part of the first group of applicants.

To qualify for the award, the WVDP had to demonstrate that it voluntarily had adopted and implemented an EMS, had attained previously specified environmental objectives, had made a commitment to achieve four future goals, had a public outreach program, and had a sustained record of environmental compliance.

The WVDP renewed its application to the Performance Track Program in 2004 by identifying three commitments to be accomplished by the end of CY 2006. The commitments and the 2006 annual reporting accomplishments were:

- Reduce Halon 1301 on-site inventory by 580 pounds – In 2004, 603 pounds of on-site Halon 1301, the entire on-site inventory, was eliminated. There were no additional activities in CY 2005 or 2006.

- Reduce total energy usage by 10% from the 2003 baseline – Total energy usage was reduced by 26.5% in CY 2006.

- Reduce radiological curies in wastewater discharges by 10% from the 2003 baseline – Total radiological curies discharged in wastewater was reduced by 13% in CY 2006. (Also see "National Environmental Performance Track" in Chapter 1.)

Environmental Issues

Unplanned Releases. No unplanned releases of pollutants or hazardous substances, radiological or nonradiological, from the WVDP occurred in 2006.

Coalition Files Suit Over WVDP EIS Process. On August 26, 2005, the Coalition on West Valley Nuclear Wastes (a citizens' group) filed a complaint in the U.S. District Court, Western District of New York, against the DOE regarding work at the WVDP.

In its complaint, the Coalition contended that the March 26, 2001 DOE announcement that revised the approach to the EIS for completion of the WVDP Act violated NEPA and the Stipulation of Compromise Settlement between the DOE and the Coalition. The EIS, which had been initiated in 1988, was revised into two separate studies: one for near-term waste management decision making and a second for final decommissioning and/or long-term stewardship. (See "National Environmental Policy Act" earlier in this chapter.)

Reaching a ROD on the Waste Management EIS in June 2005 enabled the DOE to evaluate offsite shipment and waste disposal, which helped accelerate the shipping of LLW being stored at the site and waste being generated by routine Project activities.

Through the complaint, the Coalition sought to prevent the DOE from taking any actions as a result of the Waste Management EIS. It also requested that the DOE be ordered to complete the EIS process as outlined in 1988, requested a declaration that separating the EIS into two EISs violated NEPA, and sought a declaration that the DOE is not empowered to reclassify waste at the West Valley site using the "waste incidental to reprocessing" determination process.

As yet, no rulings have been made regarding this lawsuit.

Proposed Legislation. In 2006, the impasse continued between the DOE and NYSERDA pertaining to the respective agency responsibilities for decommissioning and/or long-term stewardship at the WVDP and the WNYNSC. In mid-2005, proposed legislation dealing with the long-term responsibility for the WVDP had been introduced into the U.S. House of Representatives by Congressmen Kuhl, Boehlert, Reynolds, and Higgins, and a companion bill was introduced into the U.S. Senate by Senators Schumer and Clinton. The bill, entitled "West Valley Remediation Act of 2005," included provisions for federal (DOE) takeover of the responsibility for the WVDP and the entire WNYNSC from the current owner, the state of New York. The legislation directed the DOE to complete and issue a draft of the site's decommissioning and long-term stewardship EIS within two years of enactment of the law. The bill also included a provision for minimum funding levels and prohibited any new waste from being transported to West Valley.

The future progress of this legislation is uncertain, as it remained in congressional committee as of the end of 2006. In January 2007, the bill was reintroduced in the U.S. Senate as the "West Valley Remediation Act of 2007." In May 2007, the legislation was re-introduced in the House of Representatives by Representative Kuhl. It remains in congressional committee.

NYSERDA Files Suit to Determine Federal Responsibilities at the West Valley Site. The NYSERDA Board of Directors voted to authorize legal action against the DOE over issues relating to ongoing cleanup responsibilities at the West Valley site. On December 11, 2006, a legal complaint was filed in U.S. District Court in Buffalo on behalf of New York State against the fed-

eral government regarding the cleanup at West Valley. NYSERDA is a plaintiff in the lawsuit, along with the state of New York and NYSDEC. New York is suing the U.S. government to clarify federal responsibilities for the West Valley site.

Currently, the litigation has been stayed pending the outcome of discussions amongst the parties regarding respective cleanup responsibilities.

Environmental Actions

Construction and Demolition Debris Landfill (CDDL). Closure of the on-site CDDL was completed in August 1986. The solid waste landfill area was closed in accordance with NYSDEC standards for this type of landfill, following NYSDEC approval (Mitrey, 1986) of the closure plan (Standish, 1985). To meet routine post-closure requirements, the CDDL cover was inspected in the spring and fall of 2006 and found to be generally in good condition. The grass cover on the clay and soil cap is routinely maintained and cut, and drainage is maintained to ensure that no obvious ponding or soil erosion occurs.

NRC-Licensed Disposal Area (NDA). As discussed previously in this chapter, a draft "Corrective Measures Study Work Plan for the West Valley Demonstration Project" was submitted to NYSDEC in 2005 and conditionally approved in 2006. In response to Core Team comments on the NDA, the DOE is evaluating engineering controls. In early 2007, the DOE committed to design and construct infiltration controls (such as a geomembrane cap) on the NDA. In addition, plans include installation of a slurry wall upgradient of the NDA and the potential for a groundwater/surface water diversion system to deflect waters away from the NDA.

Project Assessment Activities in 2006

As the primary contractor for the DOE in CY 2006 at the WVDP, WVNSCO maintained a comprehensive review program for proposed and ongoing operations. Assessments were conducted through formal surveillances and informal programs. Formal surveillances monitored compliance with regulations, directives, and DOE Orders. The informal program was used to identify issues or potential problems that could be corrected immediately.

The local DOE Project office and other agencies with responsibilities for the WVDP also independently reviewed various aspects of the environmental and waste management programs, as discussed in preceding sections. At the conclusion of the reporting period, there were no outstanding issues that had not been satisfactorily addressed. Overall results reflected continuing, well-managed environmental programs at the WVDP.

Compliance Tables

DOE Headquarters uses environmental compliance summary information from sites across the DOE complex to compile national environmental summary reports. The tables on the following pages were prepared to assist in this compilation.

Table ECS-2
WVDP Environmental Permits

Permit Name and Number	Agency/Permit Type	Description	2006 Changes	Status
West Valley Demonstration Project RCRA Part A Interim Status Application EPA ID #NYD980779540	NYSDEC/Hazardous Waste	Provides interim status under RCRA for treatment and storage of hazardous waste	Submitted a revised RCRA Part A Interim Status Application on November 1, 2006 that is currently under internal review.	No expiration date. A RCRA Part 373-2 Permit (i.e., Part B) Application was submitted to NYSDEC on December 23, 2004.
Air Facility Registration Certificate (9-0422-00005/00099)	NYSDEC/Air Emissions	Sitewide permit includes 2 boilers	None	No expiration date.
Slurry-fed ceramic melter (modification to WVDP-687-01) process building ventilation	EPA/NESHAP	Slurry-fed ceramic melter radionuclide emissions — main plant stack modified February 18, 1997	None	Permit approved February 18, 1997. No expiration date. (Request to modify submitted to the EPA August 1999.)
Vitrification Facility Heating, Ventilation, and Air-Conditioning (HVAC) System	EPA/NESHAP	Vitrification facility HVAC system for radionuclide emissions	None	Permit approved February 18, 1997. No expiration date.
01-14 Building Ventilation System (WVDP-187-01)	EPA/NESHAP	Liquid waste treatment system ventilation of radionuclide emissions in the 01-14 building	None	Issued October 5, 1987. Modified May 25, 1989. No expiration date.
Contact Size-Reduction Facility (WVDP-287-01)	EPA/NESHAP	Contact size-reduction and decontamination facility radionuclide emissions	None	Issued October 5, 1987. No expiration date.
Supernatant Treatment System/Permanent Ventilation System (WVDP-387-01)	EPA/NESHAP	Supernatant treatment system ventilation for radionuclide emissions	None	Revised January 1, 1997. No expiration date.
Outdoor Ventilated Enclosures (WVDP-587-01)	EPA/NESHAP	Ten portable ventilation units for removal of radionuclides	In early 2005, a request was made to the EPA to expand the maximum number of operating units from 10 to 15.	Issued December 22, 1987. No expiration date.

Table ECS-2 (concluded)
WVDP Environmental Permits

Permit Name and Number	*Agency/Permit Type*	*Description*	*2006 Changes*	*Status*
State Pollutant Discharge Elimination System (NY0000973)	NYSDEC/Water	Regulates discharges to surface waters from various on-site sources	An amended permit went into effect on September 1, 2006.	Permit expires February 1, 2009.
NYSDOH Environmental Laboratory Approval Program (ELAP) Certification to URS Corporation, Lab ID #10474	NYSDOH environmental laboratory certification	Certification of the Environmental Laboratory for the analysis of potable and nonpotable water samples for specific radiological and nonradiological constituents and for asbestos in friable material.	Certification was transferred from WVNSCO to URS Corporation in April 2006. The certificate was revised throughout the year as new constituents were added. Certification was renewed on April 1, 2007.	Certification expires April 1, 2008.
Buffalo Pollutant Discharge Elimination System (07-05-TR096)	Buffalo Sewer Authority/sanitary sewage and sewage sludge disposal	Permit issued to hauler of waste from the wastewater treatment facility.	Hauler renewed permit in July 2007.	Permit expires June 30, 2008.
Chemical Bulk Storage (CBS) (#9-000158)	NYSDEC regulated chemical bulk storage tanks	Registration of bulk storage tanks used for listed hazardous chemicals	As of May 2006, the WVDP no longer has tanks regulated under chemical bulk storage regulations (6 NYCRR Parts 595-599).	If regulated CBS tanks are added at the WVDP in the future, WVNSCO will include the existing CBS Registration # (CBS #9-000158) when submitting the application.
Petroleum Bulk Storage (#9-008885)	NYSDEC/petroleum bulk storage tank registration	Registration of bulk storage tanks used for petroleum	Renewal issued August 18, 2006.	Registration expires September 2, 2011.
Asbestos Handling License (#99-0427)	NYSDOL/Asbestos handling and sampling activities	WVNSCO maintains the asbestos handling license as well as specific variances for asbestos handling and monitoring.	License renewed in May 2007.	License expires on May 31, 2008; each variance has a unique expiration date.
Bird Depredation License (32)	New York State Division of Fish and Wildlife	State license for the removal of nests of migratory birds	License renewed on June 30, 2006.	NYS license expires June 30, 2007.
Bird Depredation Permit (MB747595-0)	U.S. Fish and Wildlife Service	Federal permit for the limited taking of migratory birds and active bird nests	Permit renewed on July 6, 2007.	Permit expires June 30, 2008.

Note: Permit and license expiration dates are current as of August 2007.

Table ECS-3
Summary of Waste Management Activities at the WVDP in 2006

Waste Description	*Type of Project*	*2006 Weight or Volume*	*Discussion*	*ASER Section*
Class A	Legacy waste	102,871 ft^3 (2,913 m^3)	Waste processed, packaged, and shipped	ECS, Chapter 1
Class B/C	Legacy waste	15,761 ft^3 (446 m^3)	Waste processed, packaged, and shipped	ECS, Chapter 1
Industrial	Legacy waste	51,431 ft^3 (1,456 m^3)	Debris around the site processed, packaged, and shipped (i.e., hardstands)	ECS, Chapter 1
Drum Cell Waste	Waste shipping	21,010 ft^3 (595 m^3)	Waste shipped	ECS, Chapter 1
Mixed Low-Level Waste	Waste shipping (STP)	2,342 ft^3 (66 m^3)	Waste packaged and shipped	ECS, Chapter 1
Main Plant	D4 project	101,120 ft^3 (2,863 m^3)	Waste packaged and shipped	ECS, Chapter 1
Class A	D4 project	20,992 ft^3 (594 m^3)	Waste packaged and shipped	ECS, Chapter 1
Industrial	D4 project	84,558 ft^3 (2,394 m^3)	Waste sorted, packaged, and shipped	ECS, Chapter 1
Radiological wastewater from the low-level waste treatment facility (LLWTF [WNSP001])	The WVDP EPA Performance Track Goal for CY 2006 was to reduce total curies discharged at outfall WNSP001 by 10%.	About 10.4 million gallons (39.3 million liters)	The commitment was surpassed in 2006 by achieving a 13% reduction, below the 2003 baseline, of curies discharged in wastewater. This achievement was due to process improvement and corrective measures implemented in 2006.	ECS, Chapters 1, 2, and 3
Treated sewage and industrial wastewaters (WNSP007)	Wastewater processing, discharge	3.62 million gallons (13.7 million liters)	The WWTF treated sewage and various industrial wastewaters that were discharged through WNSP007.	ECS, Chapters 1, 2, and 3
North plateau groundwater recovery system (NPGRS)	Pump and treat strontium-90 (Sr-90) contaminated groundwater	3.31 million gallons (12.5 million liters)	The NPGRS operated to recover groundwater from an area near the leading edge of the Sr-90 plume on the north plateau. Water was treated by ion exchange to remove Sr-90, then transferred to the lagoon system.	Chapters 1, 2, and 4
NRC-licensed disposal area groundwater interceptor trench (WNNDATR)	Interceptor trench and groundwater pre-treatment	458.9 thousand gallons (1.74 million liters)	Groundwater was pumped and transferred to the LLWTF. No n-dodecane or tributyl phosphate were encountered in 2006, therefore no pre-treatment was necessary.	Chapters 1, 2, 3, and 4
Digested sanitary sludge	Waste shipping and disposal	252.4 tons (229.0 metric tons)	Digested sludge from the site sanitary and industrial wastewater facility was shipped to the Buffalo Sewer Authority for disposal.	ECS
Medical Wastes	Disposal	No medical waste shipped off site in 2006	The services of a permitted waste hauler and disposal firm is retained to manage medical wastes.	ECS
Sanitary Waste	Cleanup-stabilization	1,689.4 tons (1,532.6 metric tons)	Cleanup stabilization waste included industrial waste.	ECS, Chapter 1

Table ECS-4
WVDP RCRA SSWMUs and Constituent SWMUs

WVDP RCRA SSWMUs and Constituent SWMUs Identified in The RFI		
SSWMU	***SWMU***	***Constituent SWMUs***
SSWMU #1 – Low-Level Waste Treatment Facilities (LLWTF)	#s 3, 4, 17, 17a, and 17b	Former Lagoon 1 LLWTF and LLWTF Lagoons 2, 3, 4, and 5 Neutralization pit and interceptors
SSWMU #2 – Miscellaneous Small Units	#s 5, 6, 7, and 10	Demineralizer sludge ponds, and solvent dike Effluent mixing basin Waste paper incinerator
SSWMU #3 – Liquid Waste Treatment System (LWTS)	#s 18/18a and 22	LWTS Cement Solidification System
SSWMU #4 – High-Level Waste (HLW) Storage and Processing Area	#s 12/12a, 13, 19, and 20	HLW Vitrification Facility, and HLW Tank Farm Vitrification Test Facility waste storage areas Supernatant Treatment System
SSWMU #5 – Maintenance Shop Leach Field	#8	Maintenance Shop Leach Field
SSWMU #6 – Low-Level Waste Storage Area	#s 9/9a, 15, and 16/16a	Lag Storage (LSA #1 and #2 Hardstand) Lag Storage Building, extension and addition (LSA #3 and #4) Old and new hardstand storage areas
SSWMU #7 – Chemical Process Cell (CPC) Waste Storage Area	#14	CPC Waste Storage Area
SSWMU #8 – Construction and Demolition Debris Landfill (CDDL)	#1	Construction and Demolition Debris Landfill
SSWMU #9 – NRC-Licensed Disposal Area (NDA)	#s2, 11/11a, 23, and 39	NRC-Licensed Disposal area (NDA) Kerosene tanks and NDA container storage area Trench interceptor project and staging area for NDA
SSWMU #10 – Integrated Radwaste Treatment System (IRTS)	#21	IRTS Drum Cell
SSWMU #11 – New York State-Licensed Disposal Area (SDA)	#11	The SDA is a closed radioactive waste landfill that is contiguous with the Project premises and is owned and managed by the New York State Energy Research and Development Authority (NYSERDA). For more information, see the NYSERDA website at www.nyserda.org.
SSWMU #12 – Hazardous Waste Storage Lockers	#12	Hazardous waste storage lockers 1 to 4

Table ECS-4 (concluded)
WVDP RCRA SSWMUs and Constituent SWMUs

WVDP RCRA Individual SWMUs Not Associated With an SSWMU		
Individual SWMUs	#25	Inactive scrap metal landfill adjacent to bulk storage warehouse
	#26	Subcontractor maintenance area
	#27	Fire brigade training area
	#28	Vitrification hardstand
	#29	Industrial waste storage area
	#30	Cold hardstand area near the CDDL
	#31	NDA trench soil container area
	#32	Old sewage treatment facility
	#33	Existing sewage treatment facility
	#34	Storage locations for well purge water
	#35	Construction and demolition area
	#36	Old school house septic system
	#37	Contact size-reduction facility (CSRF)
	#38	Drum super compactor
	#39	Staging area for the NDA
	#40	Satellite Accumulation Areas and 90-day storage areas
	#41	Designated roadways
	#42	Product storage area
	#43	Warehouse extension staging area
	#44	Fuel receiving and storage area; high-intensity container and SUREPAK™ staging area
	#45	Breach in laundry wastewater line
	#46	Vitrification vault and empty container hardstand
	#47	Remote-handled waste facility

Table ECS-5
Pollution Prevention Progress for FY 2006

Recycled Materials	*2006 Quantity (tons/metric tons)*	*ASER Discussion Section*
Office and mixed paper	30.6 tons (27.8 metric tons)	ECS, Chapter 1
Corrugated cardboard	21.6 tons (19.6 metric tons)	ECS, Chapter 1
Aluminum cans	0.077 tons (0.07 metric tons)	ECS, Chapter 1
Fluorescent bulbs	0.43 tons (0.39 metric tons)	ECS, Chapter 1
Plastic (overhead transparencies and plastic drums)	0.66 tons (0.60 metric tons)	ECS, Chapter 1
Styrofoam peanuts	0.018 tons (0.016 metric tons)	ECS, Chapter 1
Stainless steel	30.6 tons (27.8 metric tons)	ECS, Chapter 1
Iron/steel	209.98 tons (190.49 metric tons)	ECS, Chapter 1
Other metals (steel drums)	0.22 tons (0.20 metric tons)	ECS, Chapter 1
Toner cartridges	0.46 tons (0.42 metric tons)	ECS, Chapter 1
Batteries (universal waste; lead acid batteries)	8.90 tons (8.07 metric tons)	ECS, Chapter 1
Engine oils	0.17 tons (0.15 metric tons)	ECS, Chapter 1
Wood (chips, compost)	3.12 tons (2.83 metric tons)	ECS, Chapter 1
Electronics recycling	10 desktop computers and 11 monitors transferred or donated for use.	Chapter 1
	22 desktop computers, 161 monitors and 1 laptop sent for recycling to Federal Prison Industries (UNICOR) recycling business group	Chapter 1

Table ECS-6
WVDP 2006 Air Quality Noncompliance[a] Episodes

Permit Type	*Facility*	*Parameter*	*Date(s) Exceeded*	*Description/ Solutions*
EPA NESHAP	All	All	None	None
NYSDEC Air	All	All	None	None

[a] *There were no episodes of noncompliance in 2006.*

Table ECS-7
Status of EPCRA (SARA Title III) Reporting at the WVDP in 2006

EPCRA Section	*Description of Reporting*	*Status* [a]
EPCRA 302-303	Planning Notification	Not Required
EPCRA 304	Extremely Hazardous Substance Release Notification	Not Required
EPCRA 311	Material Safety Data Sheet	Not Required
EPCRA 312	Chemical Inventory	Yes
EPCRA 313	Toxic Release Inventory Reporting	Not Required

[a] *"Yes" indicates that the site reported under the provision.*
"No" indicates that the site should have reported but did not.
"Not Required" indicates that the site was not required to report under the provision.

Table ECS-8
Reportable Chemicals Above EPCRA 312 Threshold Planning Quantities Stored at the WVDP in 2006

Hydrogen peroxide solution (35%)	Portland cement	Ion-exchange media
Liquid nitrogen	Diesel fuel #2	Sodium hydroxide
Oils - various grades	Gasoline	Sulfuric acid

Table ECS-9
WVDP 2006 NPDES/SPDES[a] Permit Noncompliance Episodes

Permit Type	*Outfall(s)*	*Parameter*	*No. of Permit Exceptions*	*No. of Samples Taken*	*No. of Compliant Samples*	*Percent Compliant Samples*	*Description/ Solutions*
SPDES	All	All	0	2,015	2,015	100%	NA

NA - Not applicable; no permit noncompliance episodes in 2006
[a] *Radionuclides are not regulated under the site's SPDES permit. However, special requirements in the permit specify that the concentration of radionuclides in the discharge is subject to requirements of DOE Order 5400.5.*

Table ECS-10
WVDP Migratory Bird Nest Depredation Episodes in 2006

Permit/License Type	*Parameter*	*Permit/License Limit*	*Total Removed in 2006*
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Barn Swallow Nests	15	4
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active American Robin Nests	15	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Eastern Phoebe Nests	5	0
U.S. Fish and Wildlife - Bird Depredation Permit	Removal of Active Canada Goose Nests	5	1
NYSDEC - Bird Depredation License	Removal of Inactive Migratory Bird Nests	Not limited	7